

# **Retrograde PCI of LCX via RCA Epicardial Collateral with wire based re-entry**

## **Case Presentation**

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# Patient Presentation

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Mr. : A.M

53 yrs.

Male .

174 cm , 93 kg

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Risk factors of CAD :

Dyslipidemia

+VE F.H

Not DM, Not HTN

# • Clinical Presentation

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**Patient admitted with ACS ( NSTEMI) .**

# • ECG

- Sinus
- Q III-aVF



## •Echo:

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- EF = 50 %
- RSWMA (inf wall HK)

## • Labs

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Hb 14.4

Pl 290

Wbc 8.2

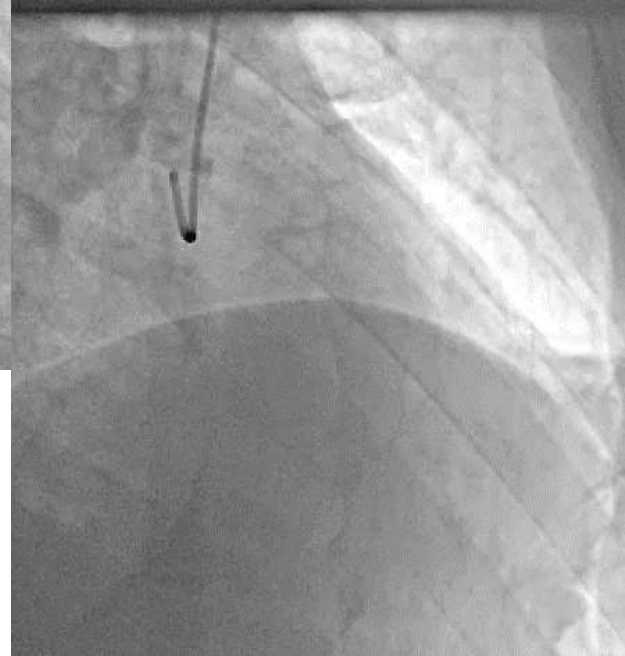
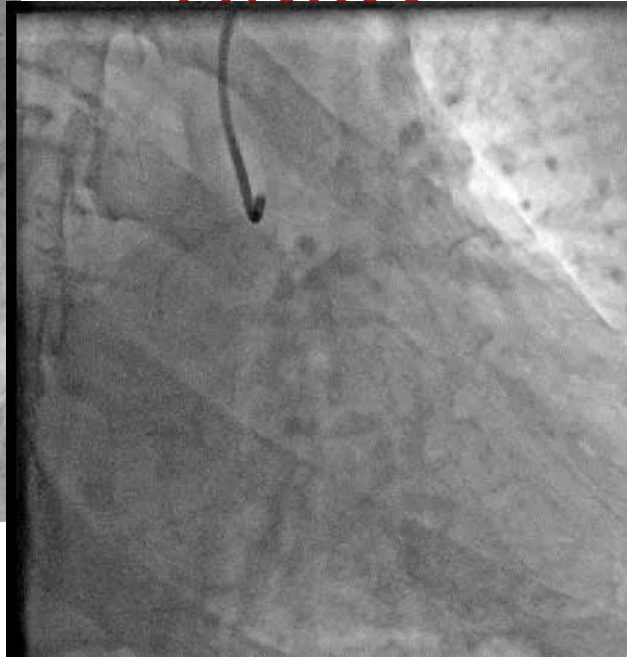
Cr 93

- Coronary Angiography
  - 11/2022
- 

- **ACCESS:**

- **Rt RADIAL a.**
- **JL 3.5 / JR 4 Diag. 6 F**

- **Coronary Angiography**  
**11/2022**



Lossy Compressed (Derived)

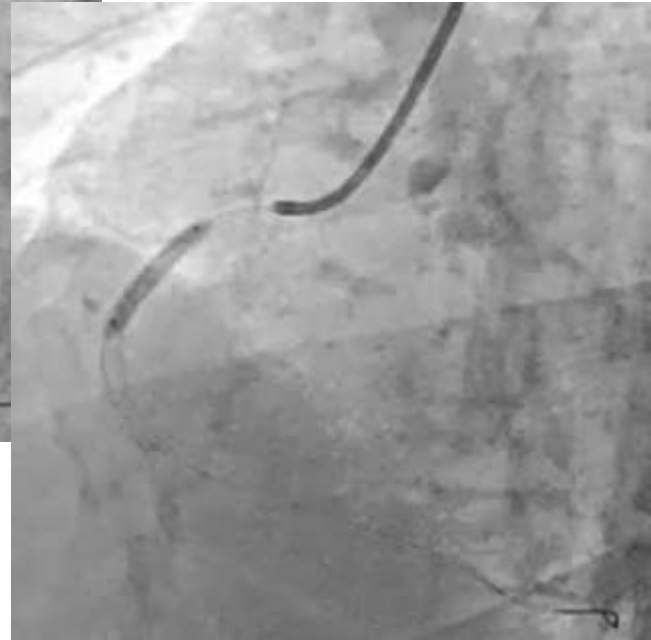
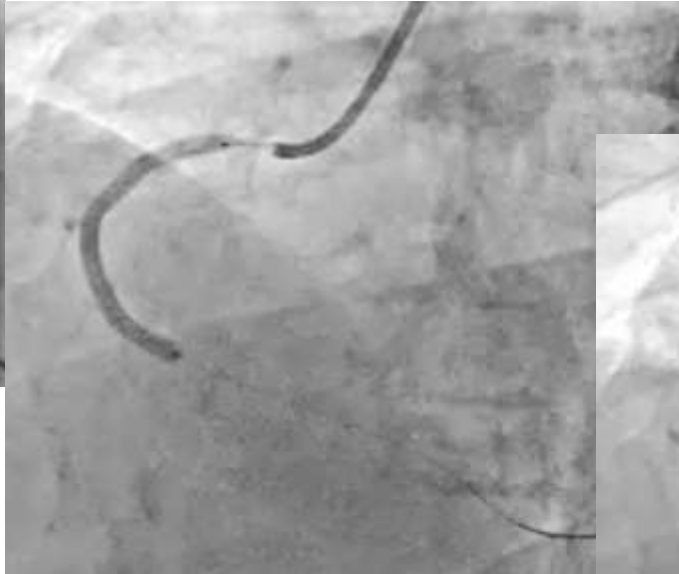
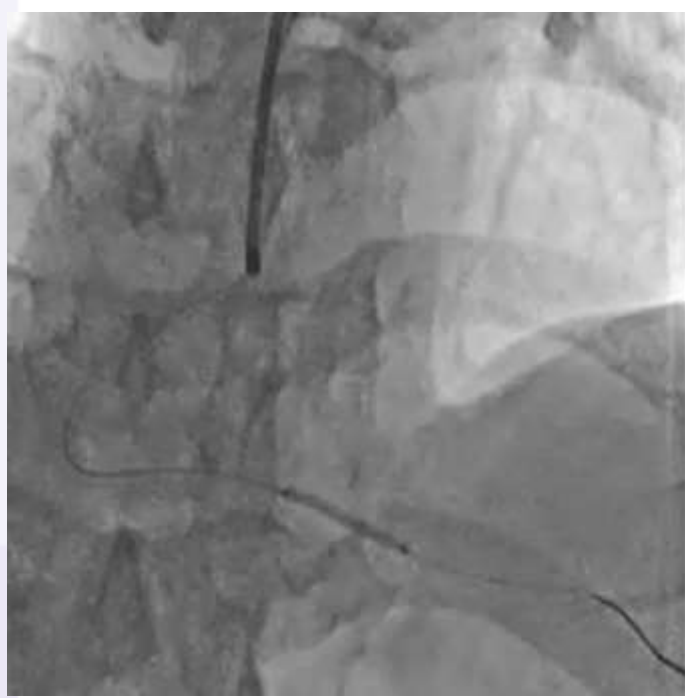


## • Coronary Angiography 11/2022

Lossy Compressed (Derived)



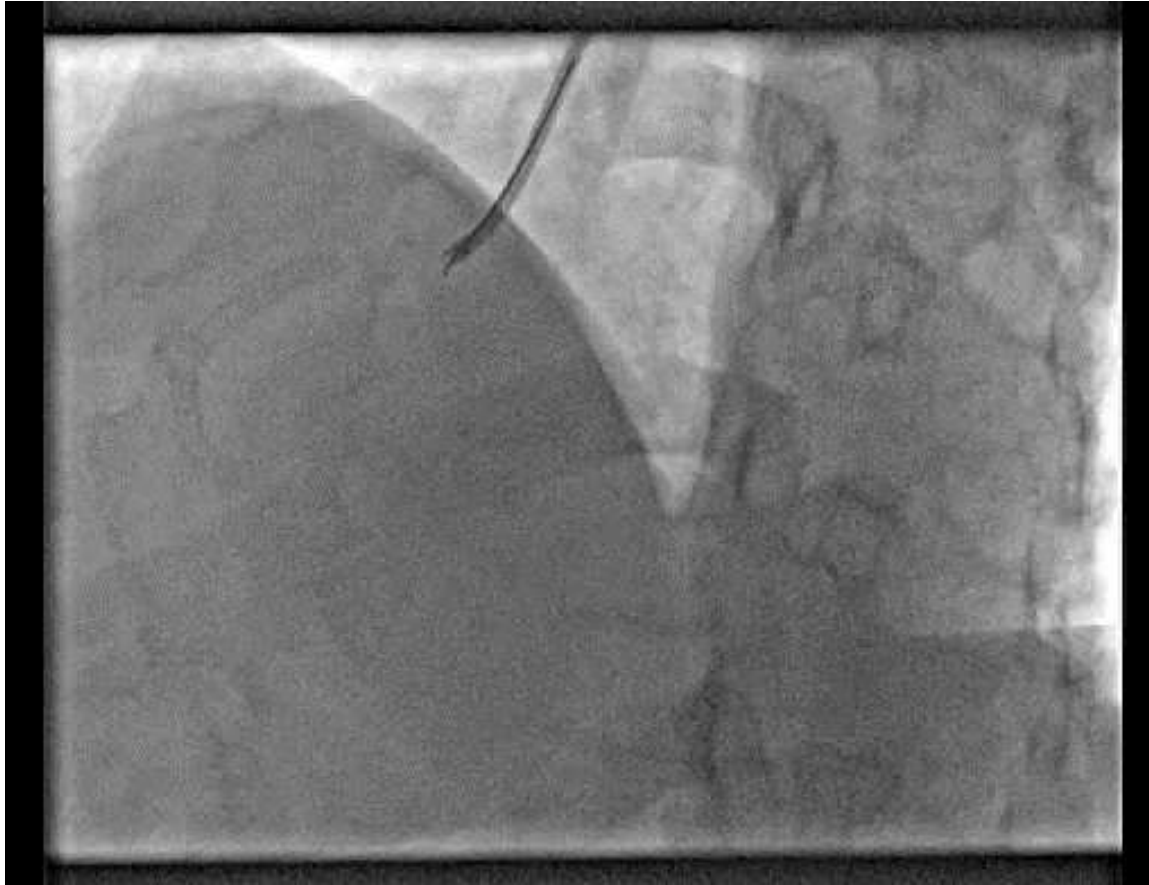
- Ad hoc OCT guided PCI to RCA
  - IVUS to LM → MLA 10 mm<sup>2</sup>
- 



- Access : Rt Radial a.
- Guide : JR4 Guiding Cath

# • OCT guided PCI to RCA

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- Access : Rt Radial a.
- Guide : JR4 Guiding Cath.

- Opd follow up
- Still symptoms with GDMT
- Significant ischemia in LCX territory

# **One Month Later**

## **December 2022**

### **PCI to CTO LCX**

**12/2022**

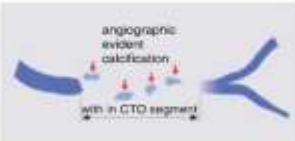
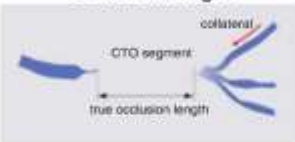
# • **Angiogram analysis before CTO PCI**

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- The analysis of angiogram is critically important for being successful in CTO intervention .

# J-CTO Score

## 2

| Variables and definitions                                                                                                                                                                                         |                                                                                                    |                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Tapered</b><br>                                                                                                               | <b>Blunt</b><br> | <b>Entry shape</b><br><input type="checkbox"/> Tapered (0)<br><input type="checkbox"/> Blunt (1)                        |
|                                                                                                                                                                                                                   |                                                                                                    | point                                                                                                                   |
| <b>Calcification</b><br>                                                                                                        |                                                                                                    | <b>Calcification</b><br><input type="checkbox"/> Absence (0)<br><input type="checkbox"/> Presence (1)                   |
|                                                                                                                                                                                                                   |                                                                                                    | point                                                                                                                   |
| <b>Bending&gt; 45degree</b><br>                                                                                                 |                                                                                                    | <b>Bending&gt;45°</b><br><input type="checkbox"/> Absence (0)<br><input type="checkbox"/> Presence (1)                  |
|                                                                                                                                                                                                                   |                                                                                                    | point                                                                                                                   |
| <b>Occlusion length</b><br>                                                                                                     |                                                                                                    | <b>Occl. length</b><br><input type="checkbox"/> <20mm (0)<br><input type="checkbox"/> ≥20mm (1)                         |
|                                                                                                                                                                                                                   |                                                                                                    | point                                                                                                                   |
| <b>Re-try lesion</b><br>Is this Re-try (2 <sup>nd</sup> attempt) lesion ? (previously attempted but failed)                                                                                                       |                                                                                                    | <b>Re-try lesion</b><br><input type="checkbox"/> No (0)<br><input type="checkbox"/> Yes (1)                             |
|                                                                                                                                                                                                                   |                                                                                                    | point                                                                                                                   |
| <b>Category of difficulty (total point)</b><br><input type="checkbox"/> easy (0) <input type="checkbox"/> Intermediate (1)<br><input type="checkbox"/> difficult (2) <input type="checkbox"/> very difficult (≥3) |                                                                                                    | <b>Total</b><br><div style="background-color: #d3d3d3; width: 50px; height: 20px; display: inline-block;"></div> points |

# • CTO PCI

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## • ACCESS:

- Radio/Femoral a. 7 F
- LM → XB 3.5 Guiding Cath. 7 F
- RCA → AL1 changed for JR4 7 F

# PCI LCX

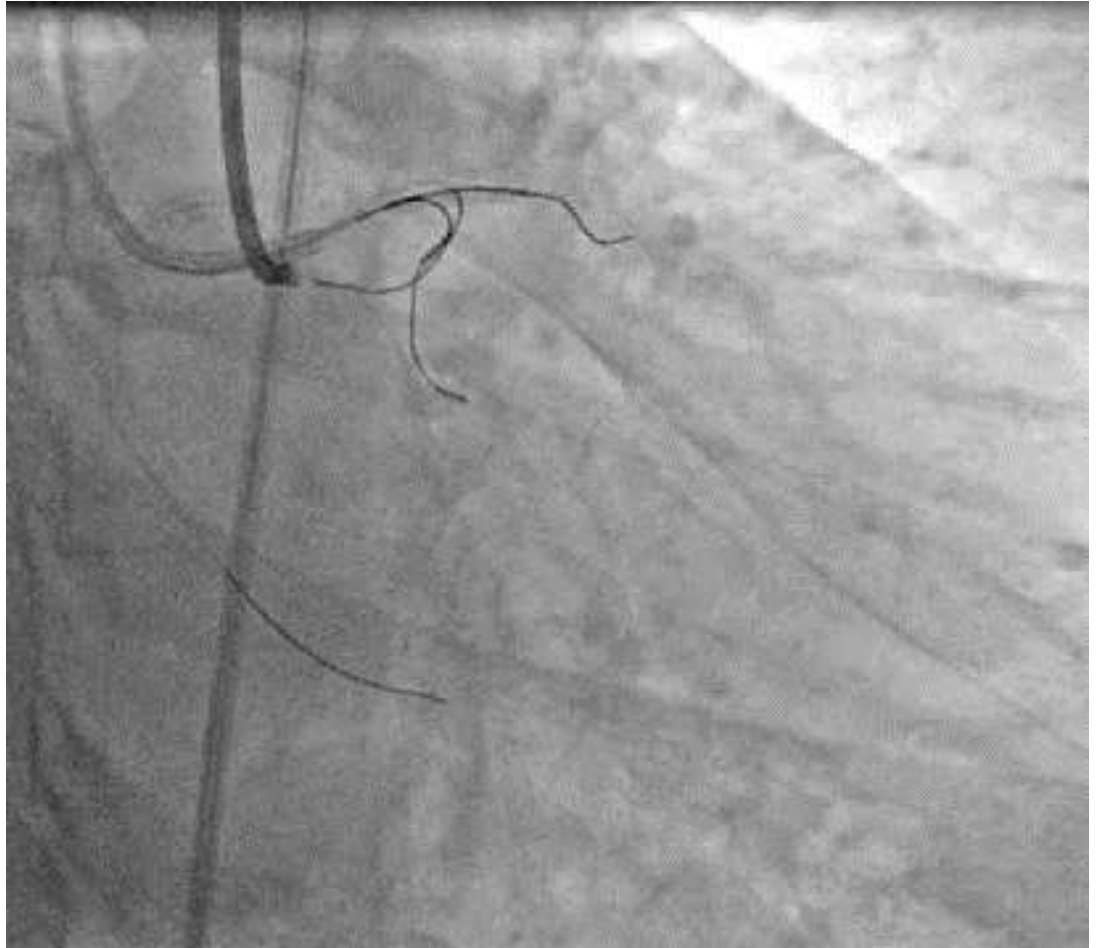
- Proximal cap : Tapered
- Length < 20 mm
- Collateral : Epicardial
- Plan :
  - AWE
  - Retrograde via Epicardial
  - ADR

## Dual Injection



## **AWE :**

- Caravel MC .
- Fielder XT.
- Pilot 200 .
- Gaia 3<sup>rd</sup> .



# Retrograde:

- Micro-injection

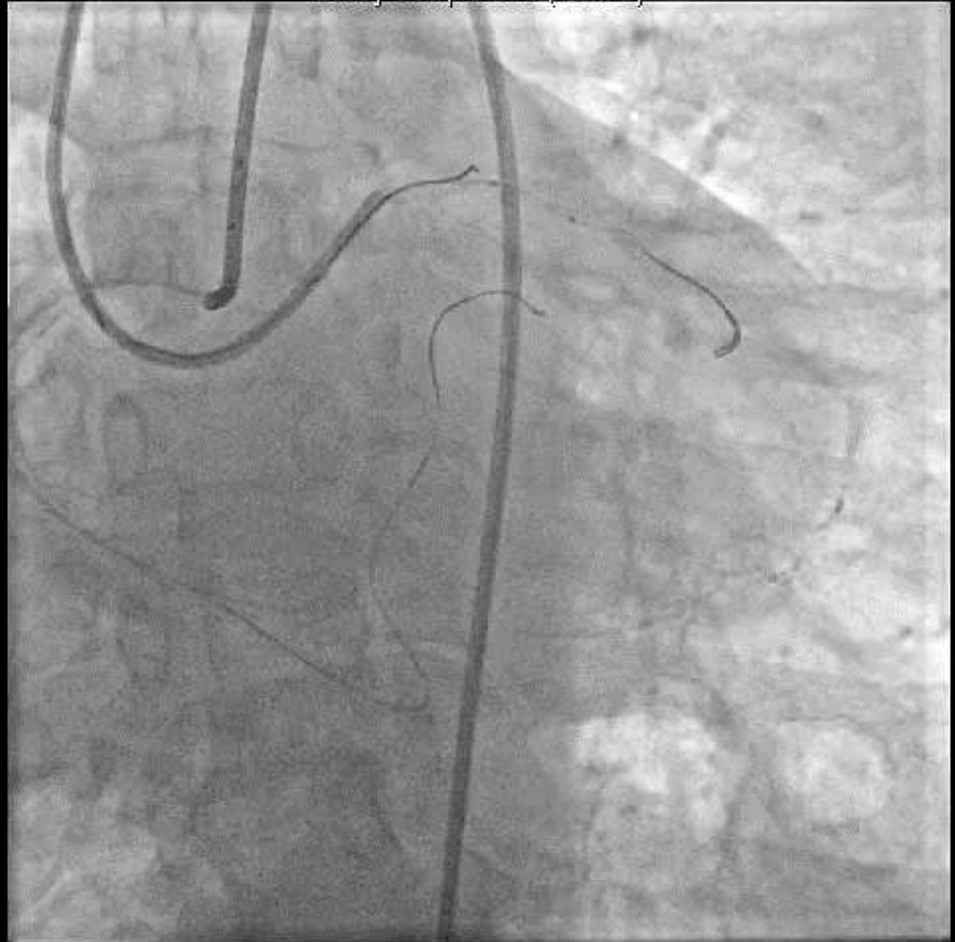


## Epic Retrograde

:

- caraval.
- Suoh 3.

Lossy Compressed (Derived)



## Retrograde:

- MC injection
- Confirmation + distal cap shape.

Lossy Compressed (Derived)



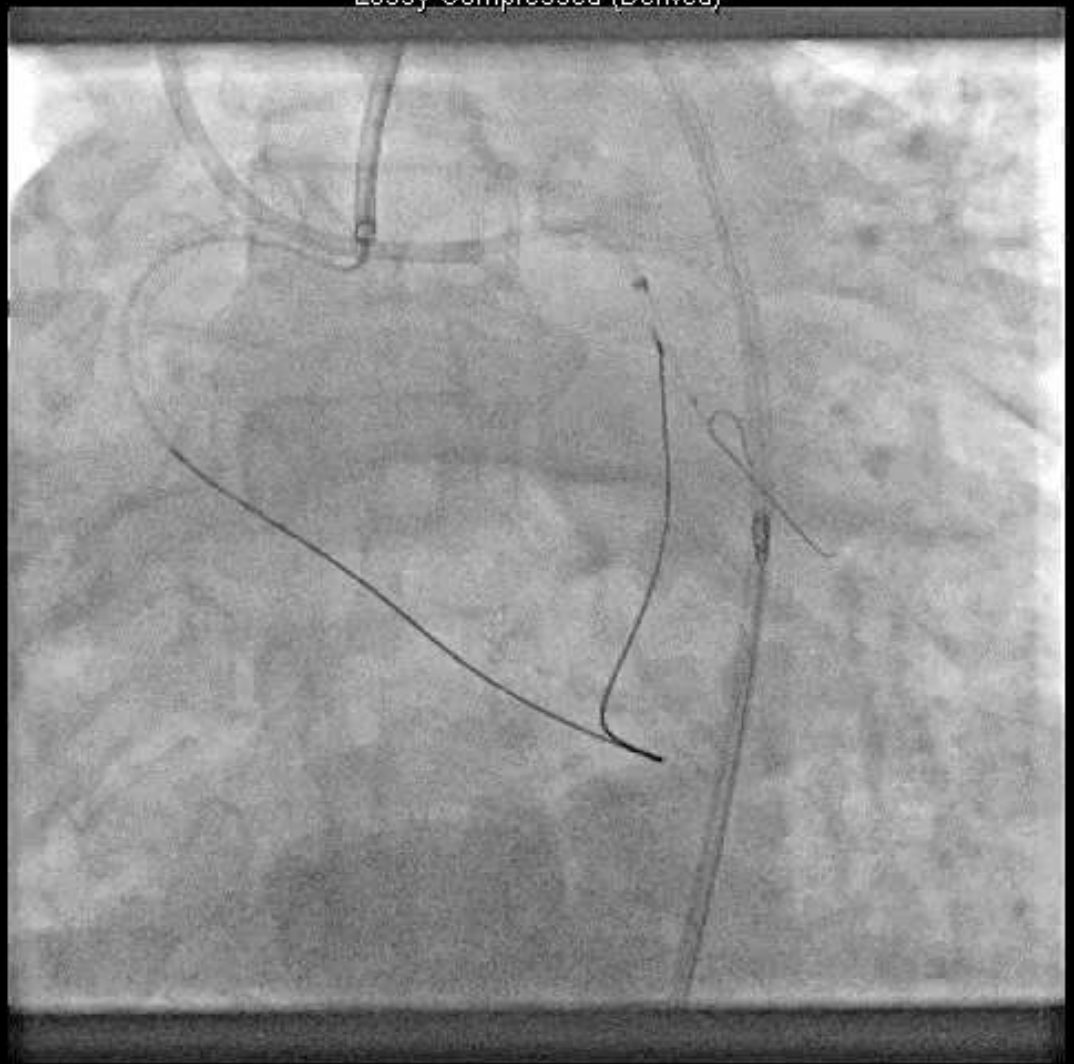
- **Wire crossing distally beyond bifurcation → better support**



**REVERSE**

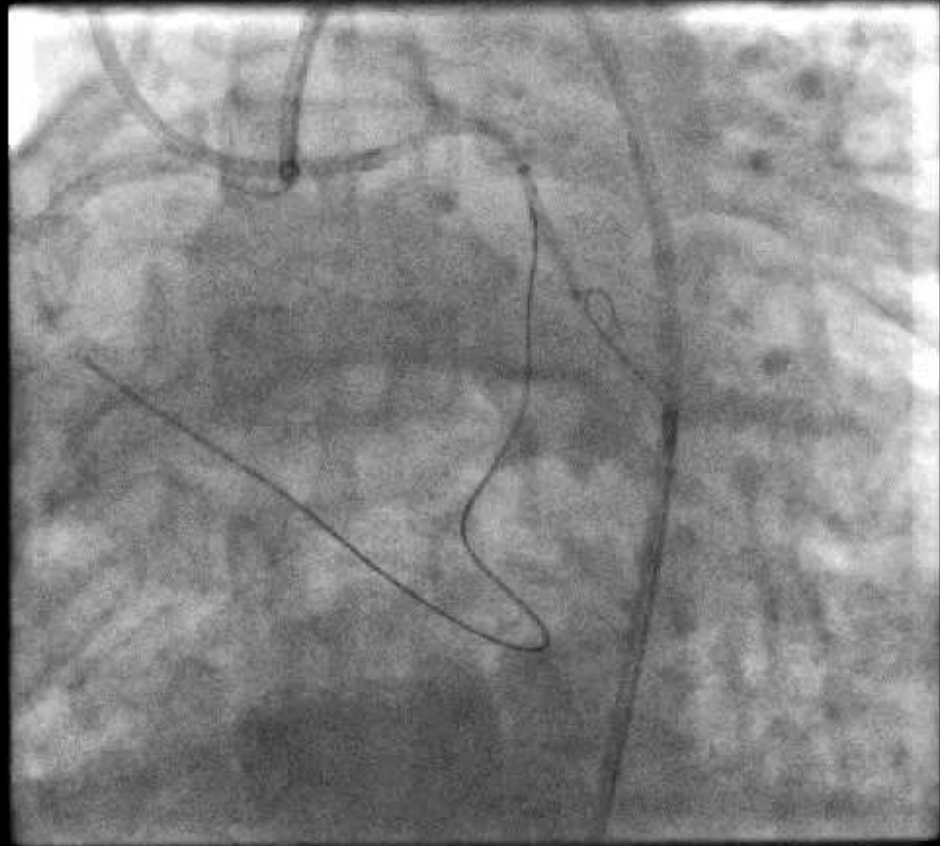
**CART :**

- Guidezilla  
6 F
- 2.5×15mm  
balloon
- Gaia 3



# REVERSE CART

Lossy Compressed (Derived)



# Dual lumen Micro-catheter



Lossy Compressed (Derived)



# Single Lumen MC→ re-entry

Lossy Compressed (Derived)



# • IVUS

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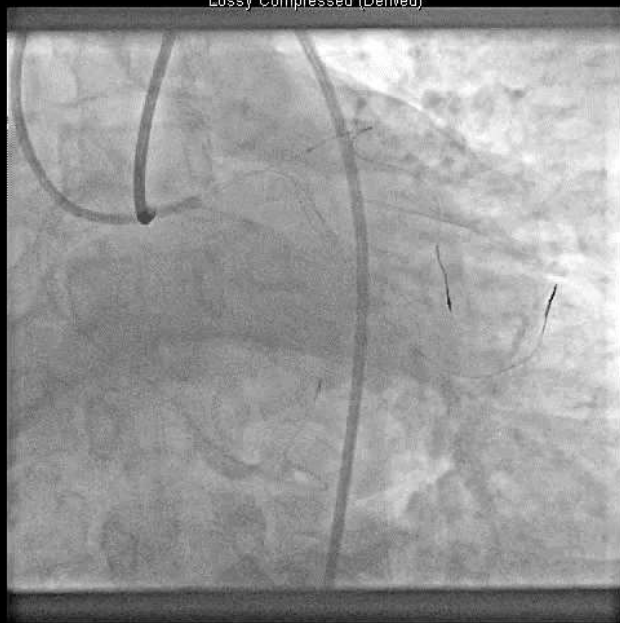


- **DES**

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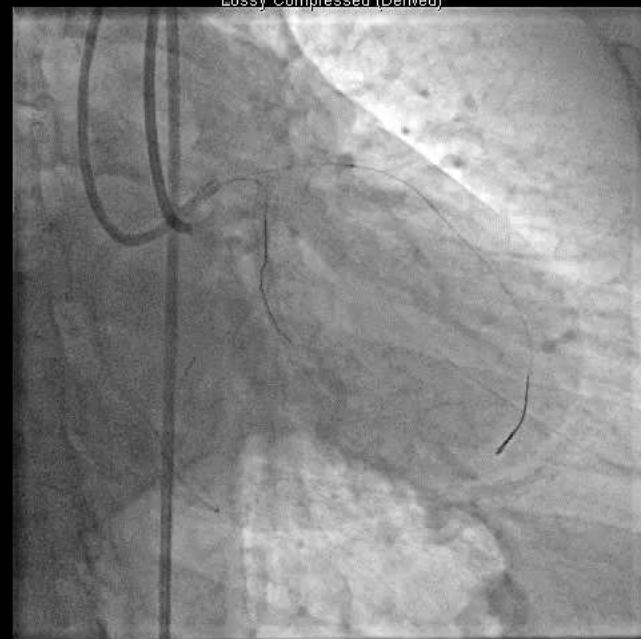
Lossy Compressed (Derived)



Lossy Compressed (Derived)



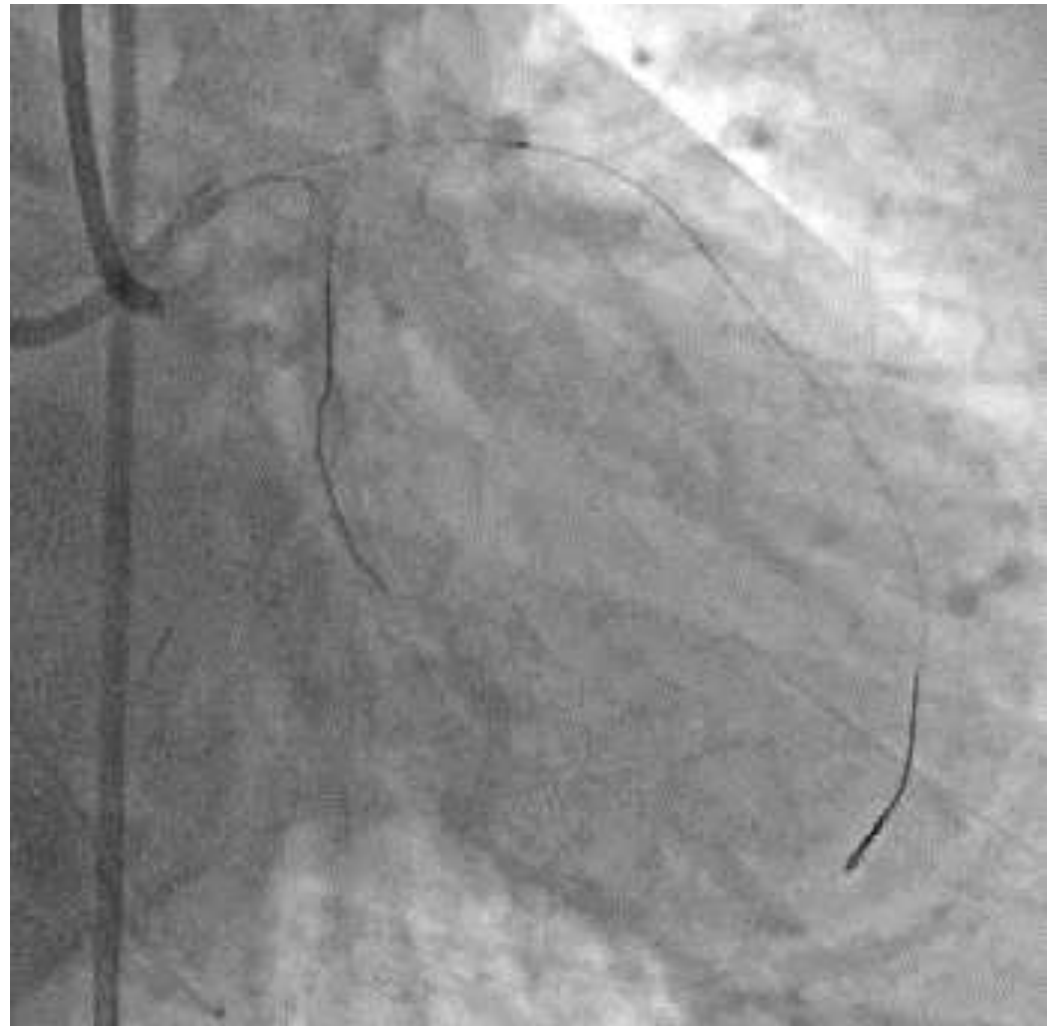
Lossy Compressed (Derived)



## - **Conclusions**

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- **PCI to LCX CTO is the most challenging among all CTO PCI.**
- **Change strategy is important for success of CTO PCI.**
- **No ad-hoc CTO PCI.**
- **Dual injection is a must.**
- **Retrograde PCI do not try shortcuts.**



**THANK  
YOU**